Application Serial No.: ~~09/780,812~~ 09/757,759 Reply to Office action of: 07/14/2004
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REMARKS

Applicants respectfully submit that all the claims presently on file are in condition for allowance, which action is earnestly solicited.

THE CLAIMS

Claims 1-7, and 14-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dugan et al. (USPN 6,425.005) in view of Szabo (USPN 5,966,126). Applicants respectfully submit that these cited references, whether considered individually or in combination with each other, do not disclose all the elements and limitations of the rejected claims. Consequently, the claims presently on file are not obvious in view of the cited references, and the allowance of these claims is earnestly solicited. In support of this position, Applicants submit the following arguments:

A. Legal Standard of Obviousness

The following legal authorities set the general legal standards in support of Applicant's position of non obviousness, with emphasis added for added clarity:

- MPEP 706.02(j), "**To establish a prima facie case of obviousness, three basic criteria must be met.** First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations**. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) ... The initial

burden is on the examiner to provide some **suggestion of the desirability** of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the **references must expressly or impliedly suggest the claimed invention** or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)."

- **In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is** not whether the differences themselves would have been obvious, but **whether the claimed invention as a whole would have been obvious**. The prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one-piece gapless support structure. "Because that insight was contrary to the understandings and expectations of the art, the structure effectuating it would not have been obvious to those skilled in the art." 713 F.2d at 785, 218 USPQ at 700 (citations omitted).

- MPEP §2143.03, "All Claim Limitations Must Be Taught or Suggested: To establish prima facie obviousness of a claimed invention, **all the claim limitations must be taught or suggested by the prior art**. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "**All words in a claim must be considered** in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)."

- MPEP §2143.01, "The Prior Art Must Suggest The Desirability Of The Claimed Invention: There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art." In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (**The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a prima facie case of obvious was held improper.**). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999).

- "**Obviousness cannot be established** by combining the teachings of the prior art to produce the claimed invention, **absent some teaching or suggestion** supporting the combination." *In re Fine, 837 F.2d at 1075, 5 USPQ2d at 1598* (citing *ACS Hosp. Sys. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)*). **What a reference teaches** and whether it teaches toward or **away from the claimed invention** are questions of fact. See *Raytheon Co. v. Roper Corp., 724 F.2d 951, 960-61, 220 USPQ 592, 599-600 (Fed. Cir. 1983)*, cert. denied, *469 U.S. 835, 83 L. Ed. 2d 69, 105 S. Ct. 127 (1984)*. "

- "When a rejection depends on a combination of prior art references, there must be **some teaching, suggestion, or motivation** to combine the references. See *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987)." Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention **where there is some teaching, suggestion, or motivation** to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP 2143.01; In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

- "With respect to core factual findings in a determination of patentability, however, the **Board cannot simply reach conclusions based on its own understanding or experience** -- or on its assessment of what would be basic knowledge or common sense. **Rather, the Board must point to some concrete evidence in the record** in support of these findings." See In re Zurko, 258 F.3d 1379 (Fed. Cir. 2001).

- "We have noted that **evidence of a suggestion, teaching, or motivation to combine** may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), Para-Ordinance Mfg. v. SGS Imports Intern., Inc., 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although "the suggestion more often comes from the teachings of the pertinent references," Rouffet, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, **the showing must be clear and particular**. See, e.g., C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232. **Broad**

conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." E.g., McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); In re Sichert, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977)." See In re Dembiczak, 175 F. 3d 994 (Fed. Cir. 1999).

- "To prevent the use of hindsight based on the invention to defeat patentability of the invention, **this court requires the examiner to show a motivation to combine the references** that create the case of obviousness. In other words, **the examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references **for combination in the manner claimed**." See In re Rouffet, 149, F.3d 1350 (Fed. Cir. 1998).

- The mere fact that references can be combined or modified does not render the resultant combination obvious **unless the prior art also suggests the desirability of the combination**. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, **there must be a suggestion or motivation in the reference** to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also In re Fritch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

- If the **proposed modification would render the prior art invention being modified unsatisfactory** for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

B. Brief Summary of the Present Invention

B.1. Problem addressed by present invention

Prior to presenting substantive arguments in favor of the allowability of the claims on file, it might be desirable to summarize the present invention in view of the problem it addresses. One of the problems addressed by this present invention is exemplified as follows: "However, none of these publications addresses the issues of users' expectations to find pages, and of discovering any mismatch between the site organization and users' expectations. It would therefore be desirable to provide a system and associated method for mining and using user access patterns, such as backtracks, to determine the most likely locations of Web pages, in order to improve the Web sites hierarchy and organization."

B.2. Summary of the present invention

The present invention teaches a hierarchy improvement system and associated method that satisfy this need. It is one feature of the present invention to provide a system and method that automatically locate "weak spots" in a hierarchical organization where the visitors' expected locations of Web pages, Web sites, or Web points (i.e., nodes) do not coincide with their actual locations.

The present system implements a method for mining and using user access patterns, such as backtracks, to determine the most likely locations of Web pages. Typically, when Web site visitors do not find the information at the

expected locations, they will backtrack up the hierarchy and search again for the target page. An important aspect of this invention is that the Web point (node or page) at which the visitors backtrack is the expected location of the page. This point is referred to herein as the expected location of the Web page.

The present method discovers or mines such backtracks, or infers the backtracks if some of the pages are cached. Once the expected locations are defined, the method could forward these expected locations with a significant number of hits to the Web site administrator for corrective action, such as adding direct navigation links from the expected locations to the target pages.

C. Application of the Obviousness Standard to the Present Invention

C.1. Independent Claims 1 and 14

The Examiner relied on the following grounds to reject the independent claims 1 and 14, stating that:

"Regarding claim 1: Dugan et al. describes a method for optimizing a hierarchical organization of a network site (Dugan et al. C 6, L 17-21) comprising: analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual locations. **Dugan et al. does not describe this feature i.e., analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual locations. However, Szabo teaches this feature** analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual

locations. **(Szabo C 7, L 43-51)** It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine Dugan et al. with Szabo for the purpose determining the "correct" results of a web search. (Szabo C 7, L 51-55).

Regarding claim 14: Dugan et al. describes a computer program product (C 7, L 54-59) for optimizing a hierarchical organization of a network site (Dugan et al. C 6, L 11-16), comprising: an analysis module for analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual locations. **Dugan et al. does not describe this feature i.e., an analysis module for analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual locations. However, Szabo teaches this feature** an analysis module for analyzing user access patterns to automatically locate weak spots in the hierarchical organization **(C 17, L 15-25)** where user's expected locations do not coincide with actual locations. **(Szabo C 7, L 43-51)** It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine Dugan et al. with Szabo for the purpose determining the "correct" results of a web search. (Szabo C 7, L 51-55)." Emphasis added.

In essence, the office action states that the main reference, namely Dugan et al., describes the preamble of independent claims 1 and 14. In response, Applicants respectfully submit that the feature recited in the claim preamble, namely "optimizing a hierarchical organization of a network site", simply refers to the general field of the present invention. In addition, Applicants do not lay claim that this feature is novel or that it constitutes, in and of itself, the core of the present invention.

Applicants agree with the Examiner that Dugan does not describe any of the elements in the body of the independent claims 1 and 14. Furthermore, Applicants submit that the field of the invention recited in the claim preamble, namely "optimizing a hierarchical organization of a network site", resides in the preamble of the claims, and thus it is not given the weight of the elements found in the body of claims 1 and 14. To this end, the fact that the main

reference, namely Dugan et al., is used to teach the general field of the invention, recognizing that it does not teach any of the elements of the claims body, is a clear indication of the weakness of the rejection ground.

Referring now to secondary reference, namely Szabo, which is relied upon by the Examiner to support the rejection ground of obviousness, the Examiner refers to certain sections that are reproduced below for ease of reference.

Szabo column 7, lines 43-51:

> For example, in a text proximity search, an initial search with an AND operator may be initiated, with the resulting "hits" subjected to a proximity filter.
>
> In using the system, the user will normally interact with the interface based on two possible scenarios; first, that a finite "correct" set of results exists, and the GUI database system is used to assist in obtaining the correct result, and second that no single "correct" set of results exists, and the GUI database system is used to define thresholds, ranges, boundaries, grey zones, rankings and so forth, so as to map a search strategy to select an acceptable result or range of results. In the former case, the user may be able to determine the "correct" result when it is presented, while in the latter case, the user relies on the search strategy to present all data which meet the search criteria.

Szabo column 17, lines 15-25:

> According to another object of the invention, the methods are embodied in a computer program wherein the BGI system is implemented as an "applet" or module that can be fully or partially downloaded from a computer network such as the Internet, for use by many different computer platforms, to the extent that the applet is compiled in a common code that these platforms are enabled to interpret or execute. Such applets may be provided as JAVA or ActiveX constructs. The BGI may be attached to a browser and/or search engine facility, or can be so attached, so that the parts work as an integral unit.

The Examiner basically relies on these excerpts as teaching the following feature: "analyzing user access patterns to automatically locate weak spots in the hierarchical organization, where user's expected locations do not coincide with actual locations." Applicants respectfully traverse this rejection, and submit that, as is clear from the excerpts above, nowhere do these excerpts support or disclose the element(s) and feature(s) recited in the independent claims 1 and 14. The relevance of these excerpts to the present invention is quite unclear to Applicants.

The following definitions of terms in the claims, will help explain and clarify the present invention. In particular, the term "**weak spots**" in the hierarchical organization represent user's expected locations that do not coincide with target pages. The term "expected locations" refers to pages that the user expects will contain a link to the target page. The term "target page" refers to a page that the user is looking for.

Applicants respectfully submit that **neither Dugan nor Szabo analyzes user access patterns to automatically locate weak spots.**

Applicants further respectfully submit that neither Dugan nor Szabo recognizes the problem of identifying weak spots in a hierarchical organization (as defined in the present application), let alone finding a solution to this problem. In addition, neither reference suggests the desirability of combining Dugan and Szabo.

Furthermore, even if these two cited references were to be combined, the resulting hypothetical combination would still not describe the claimed invention as a whole, particularly that neither reference even recognizes the necessity of finding weak spots in the hierarchical organization (as defined in the present application).

As a result, based on the legal authorities above, neither Dugan, Szabo, nor the combination thereof, describes essential elements of the present invention, and consequently, independent claims 1 and 14 are not obvious in view of these two references.

C.2. Dependent Claims

The independent claims 1 and 14 being allowable, the claims dependent thereon are also allowable, and such allowance is respectfully requested. In addition, with respect to the dependent claims, Applicants do not assert each individual feature independently in the abstract, but rather in combination with the elements of claims 1 or 14.

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D. New Claims

Applicants submit that the new claims 27 through 39 are allowable for containing elements that are generally similar to those of allowable claims 1 through 26.

CONCLUSION

All the claims presently on file in the present application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned at the below-listed telephone number.

Respectfully submitted,

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